What Does the Money Do?

(The Association Between Disproportionate Share Payments and Hospital Quality, Safety, Efficiency and Financial Health)

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Abstract

The healthcare industry is experiencing a period of evolution and introspection. With Medicare and Medicaid expenses alone reaching $897.9 billion in 2015, providers are facing increased financial, governmental and public pressure to reduce costs, and at the same time deliver higher quality care. This study seeks to determine if there is a difference between the Disproportionate Share Hospital's (DSH), which receive financial assistance due to their high proportions of indigent patients and facilities that fail to qualify for DSH funding. The ACA will significantly reduce the Disproportionate Share Hospital provision to cut costs by 2022. The impact of this provision is not fully understood and this study seeks to determine if DSH funding provides a tangible benefit for the facilities that receive this supplemental assistance. The data for this study was attained from the Centers for Medicare and Medicaid Services and Hospital Compare. Facilities were grouped based on whether or not they received DSH funding, and their measured quality, safety, efficiency and financial health was analyzed. Findings suggest that there is no statistically significant association between DSH funding and hospital quality, safety and efficiency. There was, however, a nominal improvement in day's cash on hand and operating margin when comparing DSH to non-DSH facilities. The findings of this paper suggest that DSH funding should not be phased out, as its impact may go beyond the domain of patient care and affect a facility's financial viability, which in turn, may affect the community they serve.

Chapter 1

Statement of Problem

Introduction

America's hospitals are at a turning point, faced with increased pressure, both financially and publicly to bring higher quality care at a lower price. As our country moves to consolidate its spending, our legislators will look to the largest expenses to cut costs. One area that has been a target is healthcare, with Medicare and Medicaid expenses totaling $897.9 Billion in 2015 [1]. The Patient Protection and Affordable Care Act (PPACA) aims to cut health care costs in multiple ways. To put it simply the PPACA will try to cut costs by keeping the population healthier, and by treating illnesses with the most efficient and effective methods available. In theory, these practices will lead to lower costs with better outcomes, but as is often the case, theory and reality are rarely the same.

To cut costs the PPACA will move health care from a fee-for-service model, to a model based on pay-for-performance [2]. In addition to implementing new payment methodologies, the PPACA will cut costs by phasing out current subsidies for acute care facilities that serve an indigent population, and funding for graduate medical education [5,8]. The former of these two payment supplements is the focus of this paper. Disproportionate Share Hospitals (DSH) funds have historically been used to supplement hospitals that serve large low-income populations, due to the

greater cost of care associated with these patients. These patients often do not have access to the routine primary care that prevents manageable conditions from evolving in to chronic diseases with life threatening complications. In addition to not having access to adequate primary care, these populations often delay seeking treatment for chronic conditions until they become life threatening [3]. These factors, beyond the control of the facilities that treat them, have been shown to decrease a hospitals quality of care scores [2].

As value based purchasing and other quality driven incentives are implemented, hospitals will gradually be held more and more accountable for their performance. To support these cost saving measures, reimbursement methodologies will begin to penalize those facilities that fail to meet government established quality and safety metrics. In addition to bearing the losses of DSH and IME funds, these facilities will also bear the administrative burden of compiling and reporting the quality metrics that will be used to determine their reimbursement [4]. Not only will these metrics factor into a facilities reimbursement rates, these metrics have been shown to be susceptible to surveillance bias. Studies conducted on Patient Safety Indicator-12 (PSI-12), indicated a positive correlation between increased PSI-12 surveillance and PSI-12 reporting. This fear has also been linked to PSI-3, which measures pressure ulcers. This is problematic as PSI-12 and PSI-3 factor into the PSI-90 composite safety indicator, which is part of the clinical process of care measure that makes up 30% of a facilities Total Performance Score (TPS) [10].

History

Hospitals were not always centers of innovation that they represent today. Their origins lie in charitable organizations founded by wealthy public figures or religious organizations to help care for large indigent populations. As a testament to their charitable beginnings, in 1922 patient revenues accounted for on average 65.2% of hospitals total revenue. By 1994 this figure reached 94% of hospitals total revenue [5]. As the health care landscape continued to change, hospitals saw less of their revenue come from donations and an increase in revenue due to privately insured or government covered individuals. In response to this shift in revenue source, hospitals began taking more responsibility for those who could not afford to pay for the treatment they required. Since hospitals that serve large low-income populations are often not able to "cost shift", which is the process of charging private payers more to make up for inadequate government payments [11], legislators passed The Omnibus Budget Reconciliation Act of 1981 (OBRA). This legislation contained language that required states to consider the situation of hospitals that served a large indigent population when determining inpatient payment rates [5]. This legislation laid the groundwork for future DSH payments that were instituted by The Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA). COBRA mandated the institution of DSH adjustments for Medicare payments, to supplement the losses incurred by providing large amounts of charitable care. This original payment supplement was initially budget neutral and was funded by lowering the overall IPPS rate in addition to reducing funding for

medical education. By 1990 DSH adjustments became a permanent part of the IPPS. From the end of the 1980's through the early 90's both forms of DSH payments exploded. From 1989 to 1996 Medicare DSH expenses grew from $1 billion to $4 billion, while Medicaid's DSH expenditure grew from $400 million in 1988 to $17.5 billion in 1992. In response to this tremendous growth congress passed the Medicaid Voluntary Contribution and Provider-Specific Tax Amendments of 1991. This legislation placed caps on Medicaid DSH expenditure at 12% of total Medicaid spending [5].

Present and Future

As presented earlier, to cut costs the PPACA will begin to phase out DSH and IME adjustments and reduce Medicare fee-for-service payments. All together, these cost saving measures will eliminate $316 billion in spending through the year 2022. These cuts will come from reductions to Medicaid and Medicare DSH payments of $22 billion and $34 billion respectively, and $260 billion in reduction to Medicare fee-for-service payments [6].

Purpose of Study

The purpose of this study is to determine the association between DSH payments and relevant quality, safety, efficiency and financial health metrics. This information is important to the healthcare community as these metrics are used to

drive reimbursement and are available to the public. In addition to reimbursement and public reporting, a positive association between DSH payments and quality, safety, efficiency and financial metrics may be cause to suggest the delaying of further DSH reductions.

Research Questions

This study answers the following research questions:

1. Is DSH funding associated with measured performance in clinical outcomes measures?
2. Is DSH funding associated with measured performance in hospital efficiency?
3. Is DSH funding associated with patient safety as measured by the CMS scoring methodology?
4. Is DSH funding associated with measured financial health?

This paper used statistical analyses to identify and determine the relationship between DSH status, quality, financial health and efficiency (as defined by CMS).

Chapter 2

Review of Literature

Socioeconomic Factors and Their Relationship to Outcomes

There have been multiple studies that have linked certain Socioeconomic Status (SES) factors to health outcomes. According to a report published by the National Quality Forum (NQF), SES represents a fundamental determinant of health. These SES factors determine access to and use of proper healthcare resources [7]. In this report the NQF acknowledges that although they have never recommended risk adjustments for SES, the growing evidence linking SES to health outcomes warrants a review of current quality measures. The report published in 2014 identifies different SES factors that may be used for risk adjustment such as income, education, race, ethnicity, and homelessness in addition to many other factors to consider. Not only does the report identify potential risk factors to consider, it also lists each factors pros, and cons. The panel convened in this report identified two-policy concerns: 1) adequate payment to reflect higher intensity of services to disadvantaged populations 2) responsibility for mitigating the risks of sociodemographic factors. In addition to identifying policy concerns, the report made several recommendations for improvement in risk adjustment. The recommendations that are relevant for the scope of this paper include: 1) where there is conceptual and empirical evidence between sociodemographic factors and outcomes that are reflected in a performance measure those factors should be

included in risk adjustment of the performance score 2) establishment of a new NQF committee focused on disparities 3) the same guidelines for selecting clinical risk factors be applied to sociodemographic factors 4) NQF and other relevant agencies should develop a standard set of sociodemographic variables should be made available for performance measurement and identification of disparities. Although this report made several recommendations for payment and policy changes, it did not recommend specific performance measures; adjustment for determining payment; use of particular risk adjustment or statistical procedures; structuring performance reward/ penalty programs.

Helton et. al. (2012) performed a cross-sectional assessment of the publicly available CMS Hospital Compare database over data from 2006-2009. Their study found a negative association between Medicaid revenue and quality scores. This further supports the evidence linking SES to clinical outcomes, as Medicaid often used a proxy for lower SES. In their study, researchers noted that in addition to lower performance scores, facilities that serve large portions of indigent populations tended to decrease the quantity and quality of services provided [2].

In a study similar to the scope of this paper Dr. Allison Marier studied the effect of DSH funding on patient experience scores. This study used publicly available impact files available from CMS as well as data from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. To measure the effect of supplemental DSH payments the author analyzed data from

providers who were slightly above and below the 15% disproportionate patient percentage (DPP) needed to qualify for DSH funds. The reason behind focusing on these particular providers was that their patient populations would in theory be similar, which would allow for analysis of the impact of DSH funds on their patient experience scores. The researcher's results showed a significant difference of in-patient experience scores between those just above and just below the 15% DPP cut off. On average the HCAHPS score of those hospitals who qualified for DSH funding were 6% higher, and an even greater improvement of 6.5% was observed when analyzing solely non-profit providers [9]. The results of the authors study further reinforce the need to analyze the effect of DSH funding on providers. This paper employs similar statistical analysis, but analyzes the effect of DSH funding on performance measures of quality, safety, efficiency and financial health.

Quality, Safety and Efficiency Metrics

A review of pertinent literature found no arguments challenging the validity of the Medicare Spending Per Beneficiary (MSPB) efficiency metric. The MSPB metric as defined by CMS measures efficiency as the average amount of Medicare part A and B spending per patient from 3 days before to 30 days after admission [13]. Medicare has targeted efficiency in the past as a means to cut costs. In the early 1980's Medicare began paying hospitals a fixed amount for each admission. This payment strategy led to a decrease in the average hospital length of stay by half. Christopher Chen and Dr. Clay Ackerly noted in their article published in The

Journal of the American Medical Association, that the introduction of the MSPB represents the first pay-for-efficiency measure associated with Medicare reimbursement [12]. To be more specific the MSPB efficiency metric accounts for 20% of a hospitals TPS [13].

A composite mortality rate comprised of five 30-day mortality measures will be used as a measure of clinical outcomes in this study. This mortality composite includes the Acute Myocardial Infarction (AMI) 30-day mortality rate, Chronic Obstructive Pulmonary Disease (COPD) 30-day mortality rate, Heart Failure 30-day mortality rate, Pneumonia 30-day mortality rate, and the Stroke 30-day mortality rate. These mortality rates as defined by CMS, are calculated as the expected deaths divided by observed deaths for each listed condition within a 30-day window [14]. Relevant literature has found that the AMI 30-day mortality rate has been proven to be a valid and reproducible indicator of AMI care; furthermore, this measure is also endorsed by the National Quality forum (NQF) [14,15]. In addition to the AMI-30 day mortality rate, the NQF has also endorsed the Pneumonia 30-day mortality rate as a measure of clinical outcomes [16,17]. No other relevant literature at the time of the study was found to refute or endorse the COPD, Heart Failure or Stroke 30-day mortality rates.

The final variable this study will measure will be PSI-90. PSI-90 is a composite of 8 patient safety indicators, with each indicator carrying a different weight. Patient Safety Indicators provide information on potential hospital

complications and adverse effects. These indicators were developed by the Agency for Healthcare Research and Quality (AHRQ) in conjunction with a clinician panel [18]. This study does not seek to determine the validity and reliability of these metrics, but will use these measures as a proxy for patient safety. Relevant literature published by The Journal of the American Medical Association has brought into question the validity of PSI-90, and the effect that surveillance bias has on its reporting [10].

Financial Performance and Quality

Relevant studies concerning financial performance and quality of care were consulted. Overall, the results from these studies indicate a positive correlation between better quality of care and increased profitability.

Mitton et. al. (2006) examined the relationship between the quality and cost of healthcare. Their results showed that integrated health systems can achieve higher quality care while lowering costs simultaneously. Additionally, their results showed that states with higher Medicare spending had lower quality care [22]. These findings may be correlated to a more elderly patient mix and may be a topic for further investigation.

A study conducted by Patricia Born and Carl Simon focused on the relationship between profits and quality for HMO plans. Their research examined

the association of the percentage of patients who received preventative measures, HMO profitability and HMO for-profit and not-for-profit status. Their results showed that patients enrolled in a not-for-profit HMO, received on average more preventive measures than their for-profit cohort. Furthermore, patients enrolled in higher profiting HMO's received more preventative measures than those enrolled in the low profit HMO group [23]. These results indicate that higher quality care can be linked to better financial performance.

Two peer-reviewed studies consulted examined the relationship between quality of care and financial performance in nursing homes. Chisholm et. al. (2013) examined the relationship between resident racial composition, quality and financial performance. Their results showed that nursing homes with higher proportions of African American residents had lower quality process measures than nursing homes with lower proportions or no African American residents. Furthermore, their research showed that nursing homes with high proportions of African American residents had a higher Medicaid payer mix and performed worse financially when compared to nursing homes with lower or no African American residents [24]. These results may be associated with the fact that Medicaid patients provide less revenue and may have more comorbidities than patients who fail to qualify for Medicaid. In a similar study which examined the association between financial performance and quality of care in nursing homes, Weech-Maldonado et. al. (2003) found that higher outcome measures and process of care scores were associated with increased financial performance [25]. These results indicate that

producing a higher quality service may allow the ability to achieve higher revenues and decrease costs.

Jason Richter and David Muhlestein investigated the association between patient experience scores and facility profitability. Their research found that increased net income was associated with more positive patient satisfaction scores and that a 1% increase in the number of patients who would recommend the hospital to others was associated with over $1 million in expected net patient revenues. Conversely, their research indicated an even stronger association between negative patient experience scores and decreased net income [26]. Although they did not associate increased financial performance with process of care scores or outcomes, their results are important as patient experience scores are factored into a facilities Total Performance Score, which, in turn affects their overall reimbursement.

Chapter 3

Research Design and Methodology

The study uses a cross sectional research design in which subjects are observed at a specific point in time. This study used databases from CMS and Hospital Compare that are available to the public. These databases do not contain any patient specific information, and contain only provider specific information. This study did not require IRB approval since it does not involve human subjects. The data collected for this study is readily available at no cost from the Center for Medicare and Medicaid Services, and Hospital Compare websites. Specifically, this study used the Inpatient Prospective Payment System (IPPS) impact file for the 2015 fiscal year, the Hospital Cost Report Information System (HCRIS), in conjunction with data readily available from the Hospital Compare database. The IPPS impact file data is derived from a combination of Medicare cost reports and Medicare claims data. The hospital compare database is based on Medicare claims data [19, 20, 21].

Data Sample Characteristics

The data set used for this study includes 3476 hospitals, 3384 of which are acute care facilities. In addition to the quality, safety, efficiency and financial metrics described in this study, this data set includes information on type of ownership, and

region in which these facilities reside. These figures are further described in the **Tables 1 and 2** listed below.

Ownership	Total Sample Ownership	Percentage	Study Sample Ownership	Percentage
Government	590	17%	19	7%
Non-Profit	2027	58%	181	71%
Other	90	3%	0	0%
Proprietary	769	22%	55	22%
Grand Total	**3476**	**100%**	**255**	**100%**

Table 1 – Facility Ownership

Region	Total Sample Region	Percentage	Study Sample Region	Percentage
Central East	832	24%	75	29%
Central West	831	24%	45	18%
East Coast	1111	32%	103	40%
Mountain	238	7%	20	8%
Pacific	412	12%	12	5%
Puerto Rico	52	1%	0	0%
Grand Total	**3476**	**100%**	**255**	**100%**

Table 2 – Facility Location

Inclusion and exclusion criteria

To analyze the association between DSH payments and the chosen metrics, this study will need specific inclusion and exclusion criteria. To control for the effect of increasing DSH payments this study will eliminate hospitals with more than 17.5% DPP and hospitals with less than 12.5% DPP. This exclusion criterion will allow this study to control for other confounding factors such as extremely high and low DPP. Furthermore, this criterion will allow for the examination of the effects of

simply qualifying for DSH funds, and if qualification is associated with increased quality, safety, efficiency and financial health.

Study Sample Construction and Size

The final sample used for analysis was constructed using information from the 2015 IPPS impact file, Hospital Compare data and the Healthcare Cost Report Information System. First, all facilities with a DPP greater than 17.5% and lower than 12.5% were eliminated from the data set gathered from the IPPS impact file for the 2015 FY. This data was then combined with metrics derived from the Hospital Compare database, and HCRIS data files. All facilities with insufficient or missing data were eliminated, leaving a final sample size of n=255 for analysis. The ownership and regions of the study sample, detailed in **Table 1** and **Table 2**, indicate that the study sample and overall population are similar in both ownership and region. 160 of the 255 facilities studied qualified for DSH funding. All facilities used for this study are defined as acute care facilities.

Variables of Interest

This study seeks to determine the association between DPP and hospital quality, safety, efficiency and financial health. To analyze these associations this study will use the following metrics.

Disproportionate Patient Percentage

Disproportionate Patient Percentage (DPP) will be used as a proxy variable for the percentage of indigent population that a hospital treats. This value is calculated as the Medicare Social Security Income Days divided by Total Medicare Days, plus Medicaid, Non Medicare Days divided by Total Patient Days and is further illustrated in **Figure 1** below. CMS uses this variable to calculate the amount of DSH payment that a hospital receives. A hospital must reach 15% DPP to qualify for DSH payments. DPP is a continuous variable that did not need to be recoded for this study [9].

$$DPP = \frac{Medicare\ SSI\ days}{Total\ Medicare\ days} + \frac{Medicaid,Non\ Medicare\ Days}{Total\ Patient\ Days}$$

Figure 1 – Disproportionate Patient Population Formula

Quality of Care

Quality of care will be measured using five 30- day mortality measures. These mortality measures are tracked by the hospital compare database and are calculated by dividing the observed deaths within a 30-day window by the risk-adjusted expected deaths. This produces a continuous variable that does not require recoding. The mortality measures that will be used in this study will include: the 30-day Acute Myocardial Infarction (AMI), 30-day Chronic Obstructive Pulmonary Disease (COPD), 30-day Heart Failure, 30-day pneumonia, and 30-day Stroke mortality rate. These metrics were combined into one global quality of care score. A higher score indicates a worse mortality rate.

Efficiency

To evaluate hospital efficiency, this study will use a hospitals Medicare Spending Per Beneficiary (MSPB). This metric is determined by evaluating hospitals Medicare Part A and Part B spending from 3 days' prior to admission to 30 days after admission. This value is compared to the median MSPB amount from all hospitals and is weighted by episode count to produce a continuous efficiency metric. The metric is standardized so that a value of 1.0 indicates typical efficiency. Values higher than 1.0 indicate that a hospital may be less efficient than the typical (median) hospital [13].

Patient Safety

Patient safety will be evaluated using patient safety indicator 90 (PSI-90). PSI-90 (illustrated in **Table 3**) is a composite rate composed of eight patient safety indicators, each with their own relative weight. PSIs are a measure of adverse, preventable events that take place within an episode of care. These rates are calculated using the ninth revision of the International Classification of Diseases Clinical Modification (ICD-9 CM) to measure potentially preventable adverse events. PSI-90 is the weighted average of reliability-adjusted observed to expected ratios of the patient safety indicators listed below. A lower score indicates fewer potential medical errors and adverse events. PSI-90 is a ratio that does not need recoding for this study [10, 18].

Component Measures	Description	Weight in Composite
PSI-15	Accidental puncture or laceration	0.4917
PSI-12	Postoperative pulmonary embolism or deep vein thrombosis	0.2579
PSI-13	Postoperative sepsis	0.0742
PSI-06	Iatrogenic pneumothorax	0.0708
PSI-06	Central line–associated bloodstream infection	0.0652
PSI-07	Pressure ulcer	0.0226
PSI-14	Postoperative wound dehiscence	0.0165
PSI-08	Postoperative hip fracture	0.0011
PSI-90	Composite sum	1.000

Table 3 – PSI 90

Financial Health

Financial health was measured using metrics derived from the Healthcare Cost Report Information System (HCRIS). The metrics chosen for analysis were operating margin, day's cash on hand and days in accounts receivable. These measures are continuous variables and did not require recoding for this study.

Statistical Analysis

The analysis for this study included descriptive statistics and a Mann-Whitney U test. A Mann-Whitney U test was selected due to the nonparametric distribution of the study sample. The tools chosen to perform the analysis include IBM SPSS version 23 and Microsoft Excel. Quality, efficiency, safety and financial metrics were grouped and analyzed depending on their facilities DPP. Groups were defined according to whether they surpassed or failed to meet the 15% DPP qualification for DSH funding.

Chapter 4

Results

Simply put, the results of the study (displayed in **Table 4**) found no statistically significant association (Mann Whitney U (P<.05)) between DSH status and hospital quality, safety, efficiency or financial health. When comparing selected metrics between DSH and non-DSH groups, DSH groups performed nominally better in all areas. The most improvement seen in financial measures with operating margin (Mann Whitney U (P=.1660)) and days cash on hand (Mann Whitney U (P=.143)). These results are displayed in **Figure 7** and **Figure 8**. Again, these improvements are incremental and analysis indicates that qualifying for DSH funding is not associated with statistically significant improvement in quality, safety, efficiency and financial health.

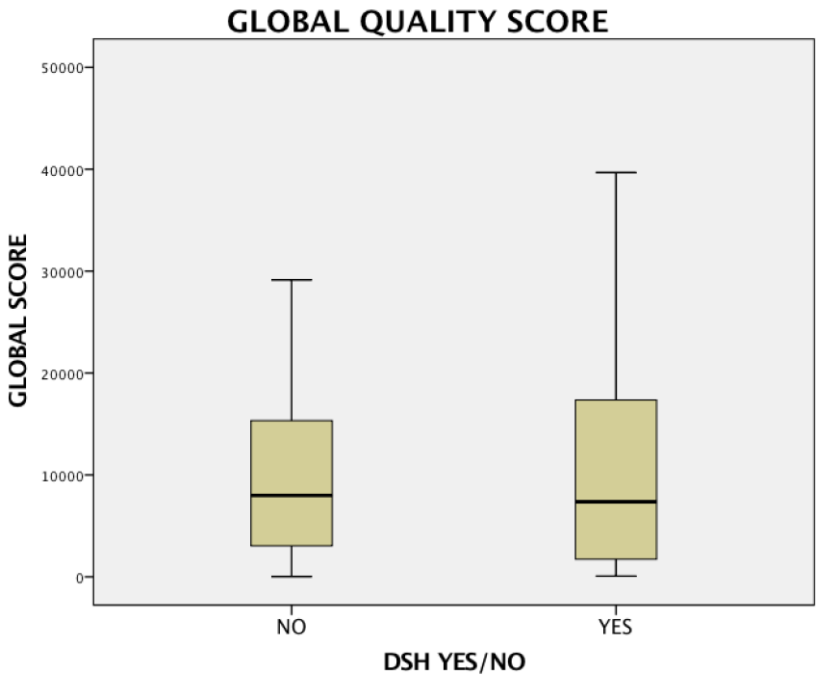

Figure 2 – Global Quality of Care Score

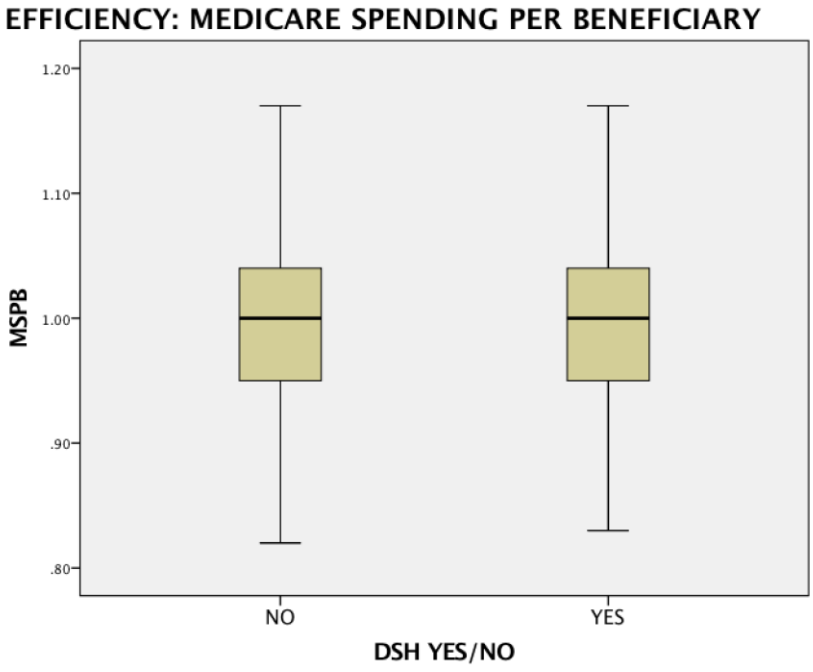

Figure 3 – Efficiency: Medicare Spending Per Beneficiary

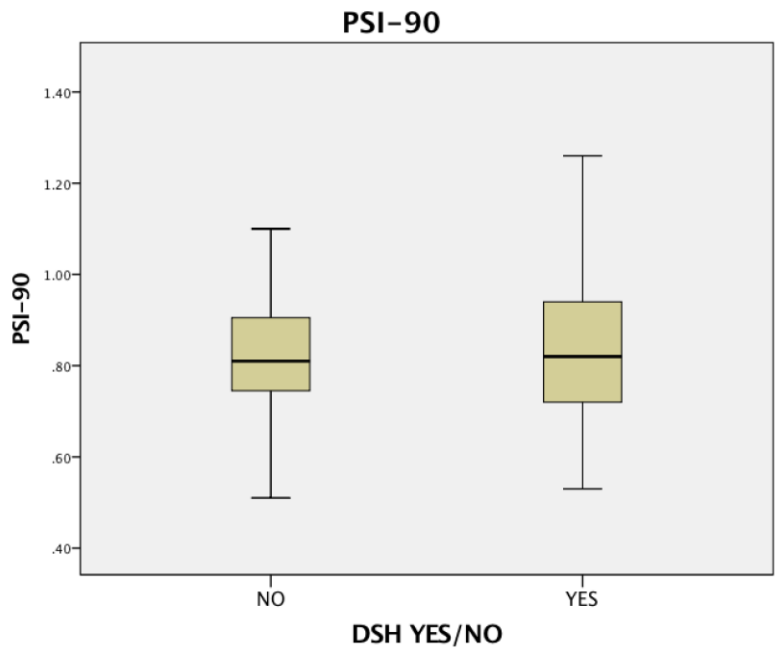

Figure 5 – Patient Safety Indicator - 90

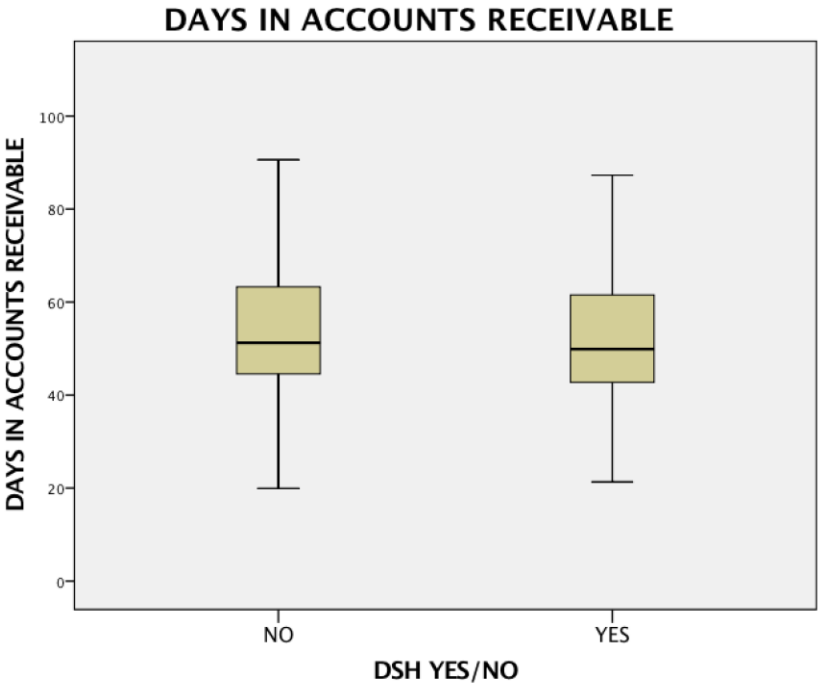

Figure 6 – Days in Accounts Receivable

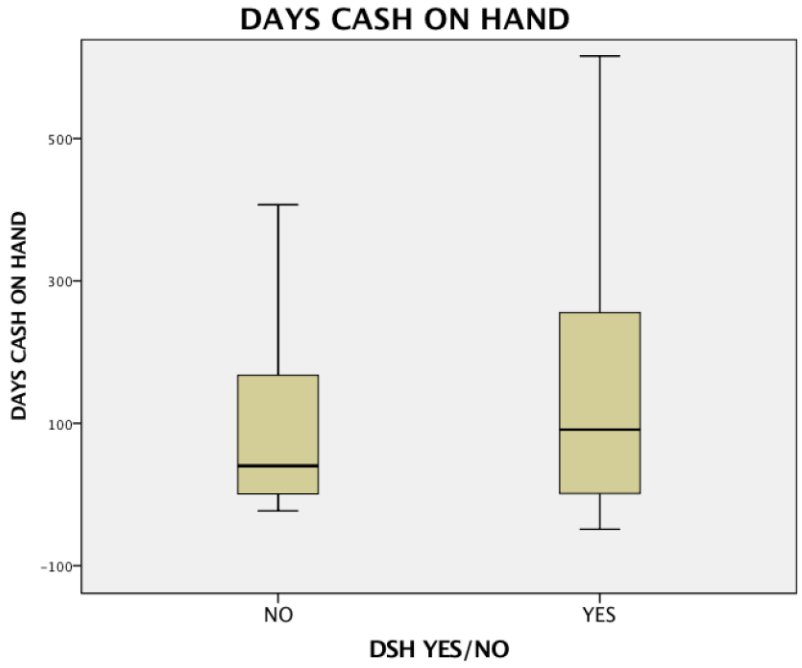

Figure 7 – Days Cash On Hand

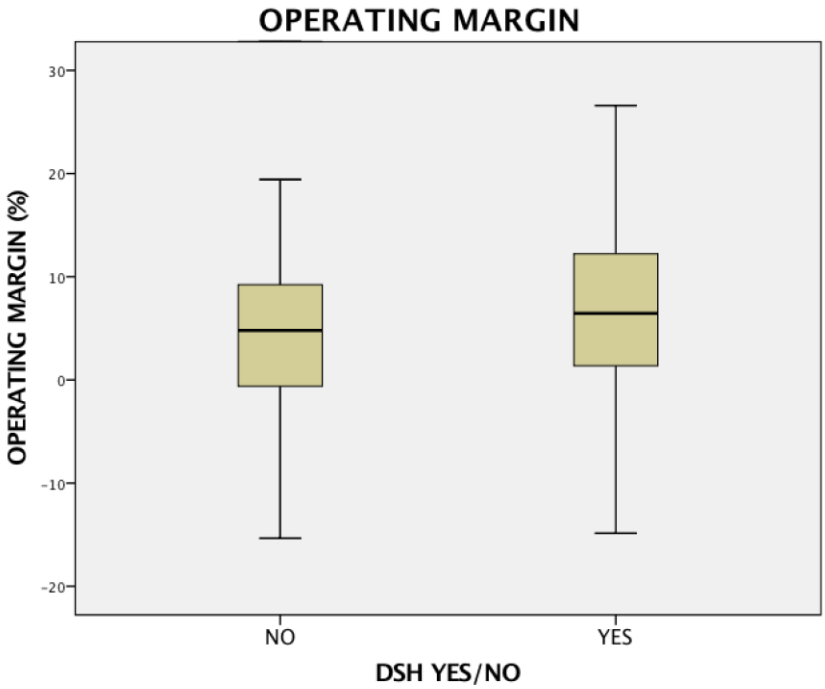

Figure 8 – Operating Margin

Mann-Whitney Test

Ranks

	DSH Y(1)/N(2)	N	Mean Rank	Sum of Ranks
PSI-90	1	160	130.05	20808.00
	2	95	124.55	11832.00
	Total	255		
EFFICIENCY: MSPB	1	160	128.40	20544.00
	2	95	127.33	12096.00
	Total	255		
GLOBAL QUALITY SCORE	1	160	127.38	20380.00
	2	95	129.05	12260.00
	Total	255		
OPERATING MARGIN	1	160	132.93	21269.00
	2	95	119.69	11371.00
	Total	255		
DAYS CASH ON HAND	1	160	133.21	21314.00
	2	95	119.22	11326.00
	Total	255		
DAYS IN AR	1	160	123.98	19837.00
	2	95	134.77	12803.00
	Total	255		

Test Statistics[a]

	PSI-90	EFFICIENCY: MSPB	GLOBAL QUALITY SCORE	OPERATING MARGIN	DAYS CASH ON HAND	DAYS IN AR
Mann-Whitney U	7272.000	7536.000	7500.000	6811.000	6766.000	6957.000
Wilcoxon W	11832.000	12096.000	20380.000	11371.000	11326.000	19837.000
Z	-.576	-.113	-.176	-1.386	-1.465	-1.129
Asymp. Sig. (2-tailed)	.564	.910	.861	.166	.143	.259

a. Grouping Variable: DSH Y(1)/N(2)

Table 4 – Mann Whitney U Test

Report

DSH YES/NO		PSI-90	EFFICIENCY: MSPB	GLOBAL QUALITY SCORE	OPERATING MARGIN	DAYS CASH ON HAND	DAYS IN AR
N	Mean	.8303	.9991	10709.0726	6.14851525	140.554578	65.2363190
	N	95	95	95	95	95	95
	Std. Deviation	.16357	.07393	9788.47238	11.2726708	283.502330	64.9296434
Y	Mean	.8568	.9977	11273.4806	6.04829121	185.397423	55.5637781
	N	160	160	160	160	160	160
	Std. Deviation	.19334	.06819	10870.1225	10.5154113	446.301614	42.4655661
Total	Mean	.8469	.9982	11063.2110	6.08562958	168.691265	59.1672737
	N	255	255	255	255	255	255
	Std. Deviation	.18294	.07024	10464.2047	10.7817863	393.577453	52.0673423

Table 5 – Study Sample Means

Chapter 5

Discussion and Conclusions

The aim of this study was to determine the relationship between DSH funding and hospital quality, safety, efficiency and financial health. The results, implications and conclusions derived from this study are discussed in this chapter.

Discussion

This cross sectional study of the association between DSH funding and hospital quality, safety, efficiency and financial health used publicly available data, which can be easily accessed from The Center of Medicare and Medicaid Services and Hospital Compare databases. The results of this study were very surprising. The analysis demonstrated that there was no statistically significant association between DSH funding and hospital quality, safety, efficiency and only a nominal association between DSH status and financial health. These results are confounding for several reasons; first and foremost, one would assume that if a facility received increased payments for the services they provided, that they would in turn perform better on selected quality, efficiency, safety and financial health metrics when compared to facilities with similar demographics, who did not receive DSH funding.

Additionally, a similar study which analyzed the association between DSH funding and HCAHPS patient experience scores found a 6% increase in patient experience scores for those facilities who just qualified for DSH funding when compared to those who barely missed the threshold. This study expected to find similar results, but the increase in patient experience scores may not be associated with a significant change in the metrics analyzed in this study.

The results of this study suggests that the elimination of DSH funding, which is scheduled to be phased out in the near future would not cause a significant detriment to the health outcomes of the populations that are served by DSH facilities. This does not imply that the elimination of DSH funding would not affect the financial viability of the facilities that receive these supplemental payments. Elimination of DSH funding without provisions to ensure that providers are able to remain fiscally sound, could affect the communities in which they reside. These facilities may be the sole sources of care for their communities and the implications of eliminating DSH payments must be studied further.

Conclusions

- DSH status is not associated with a statistically significant improvement in hospital quality, safety or efficiency.
- Facilities that qualified for DSH funds saw nominal improvements over the non-DSH cohort in operating margin, day's cash on hand and days in accounts receivable.

Study Limitations

This study is limited by several factors that are beyond its scope. This paper does not take into account patient demographics beyond their Medicaid and Medicare classification or other factors that may affect the metrics studied. The level of staffing, quality of physicians and facilities, use of best practices and payer mix may be confounding variables and warrant further investigation.

Future Research

Future researchers may expand the scope of this study in many directions. Area's to explore could include the association between DSH status and the level of staffing and amount of expenses allocated towards salaries. Additionally, there may be a need to investigate the DPP formula used by CMS to determine if a facility will qualify for DSH status. Does this formula provide an accurate description of the population that a facility serves? And is there is a need to develop a new measure that takes into account factors beyond a facilities Medicaid and Medicare population?

Works Cited

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